

REMARKS/ARGUMENTS

Claims 1-12, 14, 17, and 18 are pending in this application. Claims 13, 15-16, and 19-20 are withdrawn. Claims 1-4, 7-9, 14, and 17 are currently amended, without prejudice or disclaimer of any previously claimed subject matter.

Restriction Requirement under 35 U.S.C. §121

The Examiner required election of either Group I (claims 1-12, 14, & 17-18, drawn to a carbon product and process) or Group II (claims 13, 15-16, & 19-20, drawn to a fertilizer product). The Applicant confirms the telephone election of Group I without traverse.

Rejections under 35 U.S.C. §112

Claims 2 and 3 were rejected under 35 U.S.C. §112, first paragraph, for lack of written support. It is respectfully submitted that support for claims 2 and 3 is present in the originally filed claims 2 and 3.

Claims 1, 2, and 3 were rejected 35 U.S.C. §112, second paragraph. To promote prosecution, in claims 2 and 3, the phrases objected to have been deleted. With regard to the Examiner's comment, it is noted that claim 1 is not meant to be limiting, and the ammonia and water may be contacted with the residue before the off-gas, or, for example, one or more of the ammonia and water may be present in the off-gas. Claim 3 as amended more clearly recites that this claim is further limiting pyrolysis step a).

Claim 7 depends from amended claim 1, which now recites a hydrogen stream, thus clarifying this claim.

Objections under 37 C.F.R. §1.75(c)

Claims 8, 10-12, 14 and 17 were objected to under 37 C.F.R. §1.75(c) and MPEP §608.01(n). The claims have been amended to correct the dependency.

Rejections under 35 U.S.C. §103

Claims 1, 2, 8, 9, 10, 17 and 18 are rejected under 35 U.S.C. §103 as obvious over Asada *et al.* (*J. Health Sci.*, 48(6):473-479 (2002) in view of Richter *et al.*, U.S. Patent No. 4,915,921.

Claim 3 is rejected under 35 U.S.C. §103 as obvious over Asada *et al.* (*J. Health Sci.*, 48(6):473-479 (2002) in view of Richter *et al.*, U.S. Patent No. 4,915,921, and further in view of Vaughn *et al.*, U.S. Patent No. 6,342,129.

Claims 5 and 6 are rejected under 35 U.S.C. §103 as obvious over Asada *et al.* (*J. Health Sci.*, 48(6):473-479 (2002), in view of Richter *et al.*, U.S. Patent No. 4,915,921, and further in view of McMullen *et al.*, U.S. Patent No. 6,039,774. Claims 5 and 6 also are rejected under 35 U.S.C. §103 as obvious over Asada *et al.* (*J. Health Sci.*, 48(6):473-479 (2002) and Richter *et al.*, U.S. Patent No. 4,915,921, in view of McMullen *et al.*, U.S. Patent No. 6,039,774 and further in view of Clancy, U.S. Patent No. 1,352,179.

Claims 4, 11, 12 and 14 were rejected under 35 U.S.C. §103 as obvious over Asada *et al.* (*J. Health Sci.*, 48(6):473-479 (2002) in view of Richter *et al.* (4,915,921), and further in view of Glaser *et al.* (*Biol. Fert. Soils*, 35:219-230 (2002)).

The Examiner indicated in the Office Action that the application could become allowable if one claim were rewritten to include the entire scope of the process in one claim. Claim 1 has been amended to include multiple process steps to more clearly define the method claimed, and to promote prosecution.

It is submitted that the amended claims define a process that is not suggested by the applied references. There is no suggestion in Richter *et al.* of the method claimed of pyrolyzing a biomass to produce a solid charcoal residue, and following the claimed steps to produce a solid charcoal residue comprising a slow release soil amendment fertilizer. Richter *et al.* relates to methods for removing sulfur oxides and nitrogen oxides from exhaust gas with ammonia. Asada *et al.* relates to studies on carbonization temperature of bamboo charcoal. Nothing in Richter *et al.*, Asada *et al.*, or the other applied references provides any teaching that would suggest the specific processes defined by the amended claims. The particularly claimed processes, which include pyrolyzing a biomass, contacting it with an off-gas stream, separating hydrogen, and forming ammonium bicarbonate in the charcoal pores, to produce a solid carbon charcoal fertilizer that is useful in a variety of agricultural applications, would not have been obvious to one of ordinary skill in the art in the absence of hindsight.

Withdrawal of the outstanding rejections is therefore respectfully requested.

It is also requested that the restriction requirement be withdrawn in view of the amendments to the claims herein.

CONCLUSION


Reconsideration of the amended claims and the outstanding rejections are respectfully requested.

The Commissioner is authorized to charge any deficiency or credit any overpayment to Deposit Account 11-0980.

Respectfully submitted,

KING & SPALDING LLP

By:



Madeline I. Johnston, Esq.
Reg. No. 36,174

Date: July 18, 2006

KING & SPALDING LLP
1180 Peachtree Street
34th Floor
Atlanta, Georgia 30309-3521
Tel.: (404) 572-3541